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ABSTRACT

A comprehensive master plan is presented for the development of facilities at institutions of higher education in New Jersey. Following an overview of undergraduate, graduate, medical and dental education in New Jersey, recommendations are made on the needs for higher education facilities. A detailed listing is included of facilities at each campus which are of immediate priority, with the estimated total cost of each facility. (FS)

WILKINSON NEW LIRLY: A FACILITIES PLAN

**U.S. DEPARTMENT OF HEALTH, EDUCATION
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EF 004 136

HIGHER EDUCATION IN NEW JERSEY: A FACILITIES PLAN

The Higher Education Act of 1966 established the Board of Higher Education and gave it responsibility for overseeing and planning the development of higher education in the state. The Act also created the Department of Higher Education to carry out the policies of the Board.

The Board has recognized as a major responsibility the need to prepare a comprehensive master plan for higher education. On the basis of data and analysis developed by Heller Associates, the Board is presenting in this document a master plan for the development of facilities—classrooms, laboratories, libraries, gymnasiums and dormitories. The Board has given priority attention to planning for additional facilities because of the great need and the long period required for construction.

Two years ago the Citizens Committee for Higher Education, composed of leading citizens from throughout the state, concluded in its influential study, "A Call To Action", that higher education was in a state of crisis and that massive state expenditures for additional classrooms, laboratories and other facilities must be made immediately if New Jersey's future as a wealthy industrial state is to be secure. The sobering facts which persuaded the Citizens Committee are even more true today:

- "A Call to Action" pointed out that 55% of our undergraduate students attend college in other states. Today 54% go out-of-state. Only Alaska exports a higher percentage.
- "A Call to Action" reported that New Jersey was 48th among the 50 states in per-capita expenditures on higher education. Today we are 50th. Every other state spends more per-capita.
- "A Call to Action" demonstrated that some 220,000 qualified New Jersey students would be seeking an opportunity to attend college full-time in 1975. That

estimate remains accurate today. Large capital investments must be undertaken immediately if these students are to be given their fair chance to attend college.

Even with determination, the problem of facilities cannot be solved quickly. To build buildings takes time. Three to four years are required from the day funds for a classroom building become available until students attend classes. Complex research facilities may take even longer.

New Jersey has over the last few years prepared the framework for a higher education system of the size and quality required to serve the citizens of our state. The first section of this document describes that system and the promise it embodies.

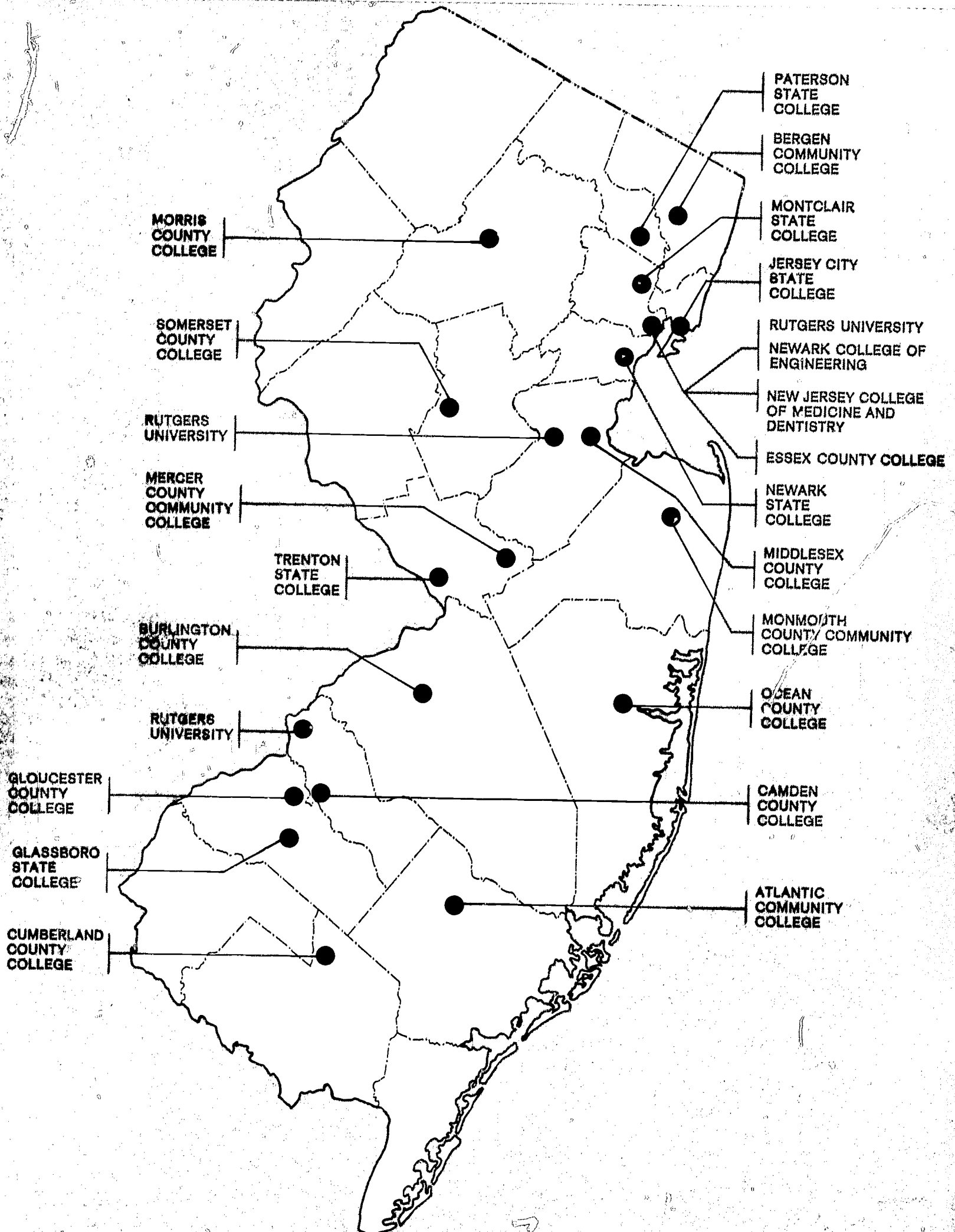
But a major effort and considerable sums of money are needed if that promise is to be fulfilled. It is therefore with a sense of great urgency that the Board of Higher Education presents the facilities plan in the later sections of this document. We believe that to delay its implementation would be irresponsible and involve great risks, not only to our young men and women who must have opportunity to obtain the best possible college education, but also to the state as a whole because its place in the American economy and culture is vitally dependent on the education of its people.

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NEW JERSEY HIGHER EDUCATION— AN EVOLVING SYSTEM

The public institutions of higher learning in New Jersey are:

- Rutgers, the State University
- the Newark College of Engineering
- the New Jersey College of Medicine and Dentistry
- the State Colleges
- and the Community Colleges.

Under the Higher Education Act of 1966, the role of the Board of Higher Education is set forth as follows:

“It shall be the duty of the Board of Higher Education to advance long-range planning for the system of higher education as a whole in the state; establish general policy for the governance of the separate institutions; co-ordinate the activities of the individual institutions which, taken together, make up the system of higher education in New Jersey; and maintain general financial oversight of the state system of higher education.”

Within this clearly defined framework, the Board has assumed its duties and has acted to carry out the mandates of the Higher Education Act.

Rutgers, The State University

Rutgers University is one of the oldest institutions of higher learning in the country. In perspective and commitment, however, it is among the most modern. Through diversified undergraduate and graduate programs, in research and in community service, the University serves the people of the entire state.

Rutgers was founded in 1766 as Queen's College. A century later, it was designated a land-grant institution. By act of the Legislature in 1945, it became the State University of New Jersey, and in 1956 control was vested in a Board of Governors having a majority of public members.

The main campus of Rutgers University is in New Brunswick. Other campuses are in Newark and Camden. Thus the University directly serves the central, northern, and southern sections of the state. Its enrollment consists of nearly 13,500 full-time undergraduate students, 2,700 full-time graduate students, and almost 9,700 part-time students.

The principal divisions of Rutgers University include:

- The College of Arts and Sciences (the direct descendant of Queen's College), the College of Agriculture and Environmental Science, the College of Engineering, Douglass College (for women), University College (for part-time students), Newark College of Arts and Sciences, the College of Pharmacy, the College of Nursing, and the College of South Jersey.
- The Schools of Law in Newark and Camden.
- The Medical School (presently providing a two-year curriculum but with plans for becoming a four-year school of medicine).
- The Graduate School (offering programs in various specialized fields), The Graduate School of Education, The Graduate School of Library Science, the Graduate School of Social Work, and the Graduate School of Business Administration.
- The University Extension Division, the Eagleton Institute of Politics, the Urban Studies Center, the Institute of Microbiology, the Radiation Science Center, The Center for Alcohol Studies, and the Interdisciplinary Research Center.

In addition, there is Livingston College, a co-educational liberal arts college now under construction on the former Camp Kilmer site and scheduled to open in the fall of 1969. This new college will place special emphasis on attracting and educating disadvantaged students and on urban studies.

New Jersey College of Medicine and Dentistry

Medical and dental training was not available in the state until 1954. In that year Seton Hall University established a college of medicine and dentistry in Jersey City. In 1964, for financial reasons, Seton Hall asked the state to take over the college. After careful review, the state assumed responsibility in 1965. The institution was renamed the New Jersey College of Medicine and Dentistry and placed under the administration of a Board of Trustees appointed by the Governor, with the advice and consent of the Senate.

Present enrollment at the College is 490 students.

The College is currently in the process of planning and developing a new campus in Newark. The Newark campus will include a new teaching hospital. Programs are planned so as to involve the College closely in the life of the community.

As one of the two medical schools of the state, the New Jersey College of Medicine and Dentistry plays an important role, not only in training needed doctors and dentists but also in providing leadership in improving medical care for all citizens of New Jersey.

Newark College of Engineering

Newark College of Engineering, one of the nation's leading engineering schools, was founded in 1881 as the Newark Technical School. It was designated a College of Engineering in 1919. Over the years, financial support has shifted from the city of Newark to the state. The college is governed by a Board of Trustees appointed by the Governor.

The college is located on a 20-acre campus near the heart of downtown Newark.

Its five principal divisions are Day Undergraduate, Evening Undergraduate, Graduate, Technology, and Continuing Engineering Studies. Its Bachelor of Science programs are in chemical, civil, electrical, industrial, and mechanical engineering. There are Master of Science programs in the same specialties, and Doctor of Engineering Science programs in chemical, electrical, and mechanical engineering.

Newark College of Engineering also offers non-degree programs for training engineering technicians.

Its enrollment consists of nearly 2,700 full-time undergraduates, 79 full-time graduate students and over 2,100 part-time students.

The importance of maintaining a public engineering college of the highest quality in our heavily industrialized state cannot be over-emphasized.

The State Colleges

There are six State Colleges: Glassboro, Jersey City, Montclair, Newark, Paterson and Trenton.

Newark and Paterson were established as city normal schools in 1855, the same year that Trenton was established as the New Jersey State Normal and Model School. Montclair and Glassboro began as two-year normal schools in 1908 and 1923, respectively, and Jersey City was established in 1929 as a New Jersey State Normal School offering three-year programs.

All six evolved into four-year State Teachers Colleges, and in 1958 each was formally designated a "State College". But they continued to function as single-purpose teacher training institutions.

In passing the Higher Education Act of 1966, the Legislature directed their transition to multi-purpose institutions:

"State Colleges shall be maintained for the purpose of providing higher education in the liberal arts and sciences and various professional areas including the science of education and the art of teaching at such places as may be provided by law."

The Board of Higher Education and the colleges acted promptly to carry out this legislative mandate.

The State Colleges offer both undergraduate and graduate programs and currently enroll more than 20,700 full-time undergraduates. They also enroll 143 full-time graduate students and over 22,300 part-time students.

The colleges formerly were under the central control of the State Department of Education. The Higher Education Act substituted control by nine-member Boards of Trustees. The appointment of Boards of Trustees was given the highest priority by the Board of Higher Education, and since the first of this year these Boards have been playing active roles in the planning and administration of the colleges.

The Community Colleges

Legislation authorizing the establishment of two-year community colleges was enacted in 1962. With both state and county financial support, the development of a statewide network of community colleges has been rapid. Public enthusiasm for these newest additions to the public system of higher education has clearly demonstrated that a vital need is being met.

This is the current status of the community college program:

IN OPERATION —
GRADUATING FIRST STUDENTS IN JUNE 1968

Atlantic Community College
Cumberland County College
Mercer County Community College
Middlesex County College
Ocean County College

IN OPERATION —
GRADUATING FIRST STUDENTS IN JUNE 1969

Camden County College

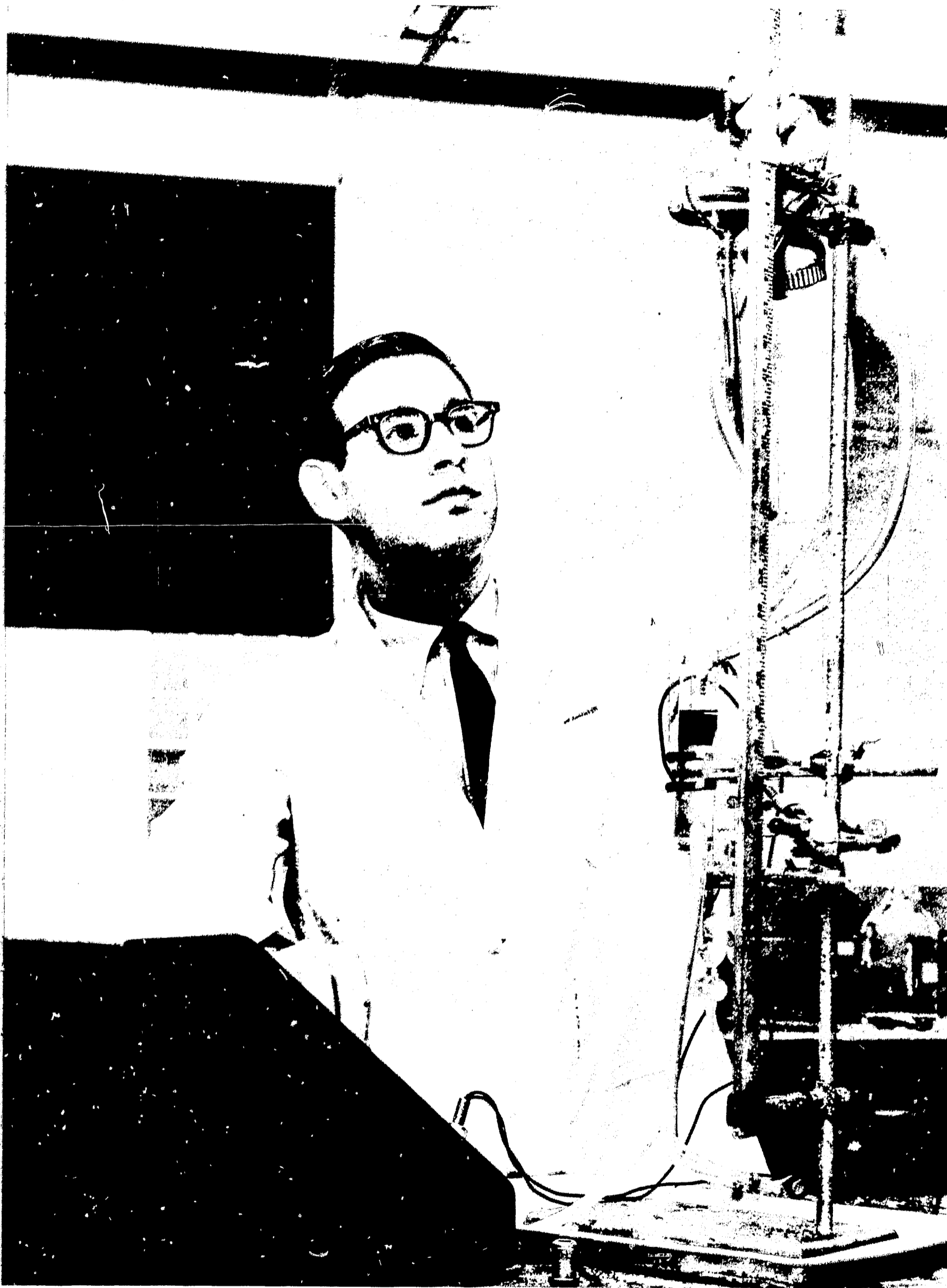
BEGINNING OPERATION IN SEPTEMBER 1968

Bergen Community College
Essex County College
Gloucester County College
Monmouth County Community College
Morris County College
Somerset County College

BEGINNING OPERATION IN SEPTEMBER 1969

Burlington County College





With the opening of six more colleges this September, approximately 10,000 full-time students will be attending the community colleges. It may be assumed that many if not most of these students would have been denied college opportunities had there been no community college program.

The community colleges offer both career programs and two-year transfer programs. The latter are predicated on the availability of spaces in four-year institutions for the junior and senior year. In supporting and encouraging the development of community colleges, the state has assumed an obligation to provide further opportunities for those students who successfully complete the two-year transfer programs.

Each community college is governed by a nine-member Board of Trustees appointed by the county's Boards of Freeholders. The state provides up to 50% of the capital and operating costs of the community colleges.

The Independent Colleges and Universities

No discussion of higher education would be complete without recognizing the important role of the independent institutions. These colleges and universities are currently educating 33,000 full-time undergraduates (of whom 23,900 are New Jersey students) and over 3,400 full-time graduate students. More than 24,000 part-time students are also enrolled. In every sector the independent institutions are making an important contribution to the strength and vigor of higher education in New Jersey.

There are 34 independent institutions of higher education in the state. Eleven of these are two-year colleges; twelve are liberal arts colleges; seven

are professional and technological colleges; and four are universities.

It is in the public interest that these independent colleges and universities remain strong. Not only do these institutions contribute to the diversity of higher education in our state; they also fulfill a vital social role in providing higher education facilities for more than one-third of New Jersey undergraduates now enrolled within the state.

Prospects for the Future

New Jersey's system of public higher education is, from a certain standpoint, quite new. Although its background can be traced back to the Queen's College of colonial times, its present structure is of recent origin.

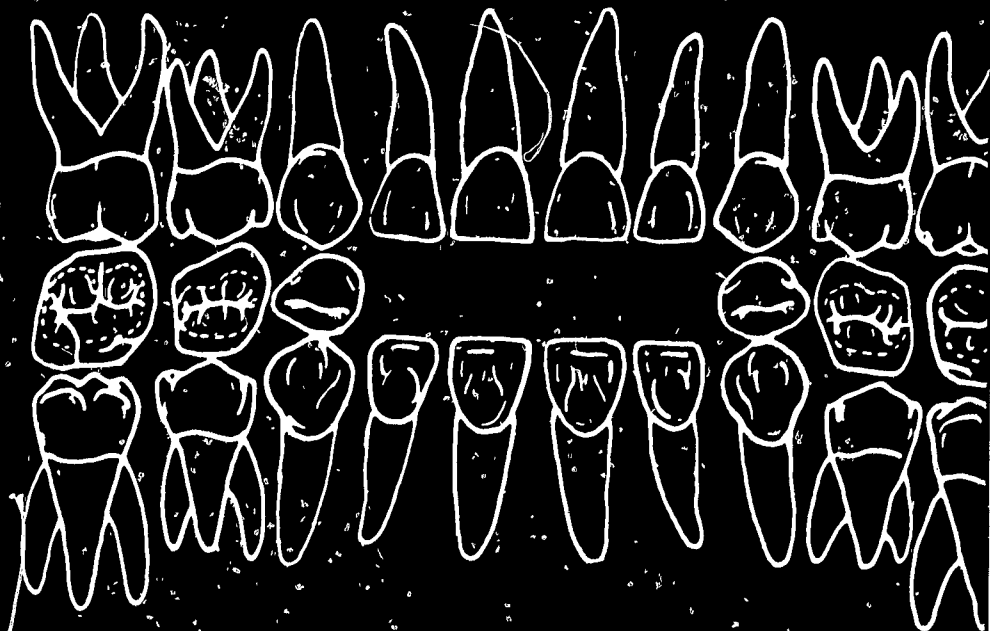
Rutgers was not designated the State University until after World War II. Development of the community college system began only in 1962. The New Jersey College of Medicine and Dentistry did not become a state supported institution until 1965. And the Higher Education Act of 1966, which established the Board of Higher Education and mandated the formation of a system of public higher education, was enacted even more recently.

Thus it is clear that the development of a system of public higher education in New Jersey is still in an early phase. The structure has been erected, but the full development of the system is still before us.

This is the right time—the crucial time—for that unfolding to take place. With public support:

- Rutgers University can continue its growth and development and can emerge as a State University that has no equal in the entire nation.
- Newark College of Engineering can build upon its strengths as a leading institution in its field and help to maintain New Jersey's position in all fields of engineering.
- The State Colleges as multi-purpose institutions can provide thousands of New Jersey youth with the opportunity to participate fully in the economic, cultural and intellectual life of the state.
- The New Jersey College of Medicine and Dentistry can develop into one of the nation's leading medical schools.
- The Community Colleges can fulfill their promise as institutions serving the people at the closest level—the community level—and of providing opportunities for vast numbers of young people who would otherwise have little chance for personal growth beyond high school.

These are the promises of New Jersey's system of public higher education, and they are promises that can be fulfilled. The balance of this document will deal with what must be done.

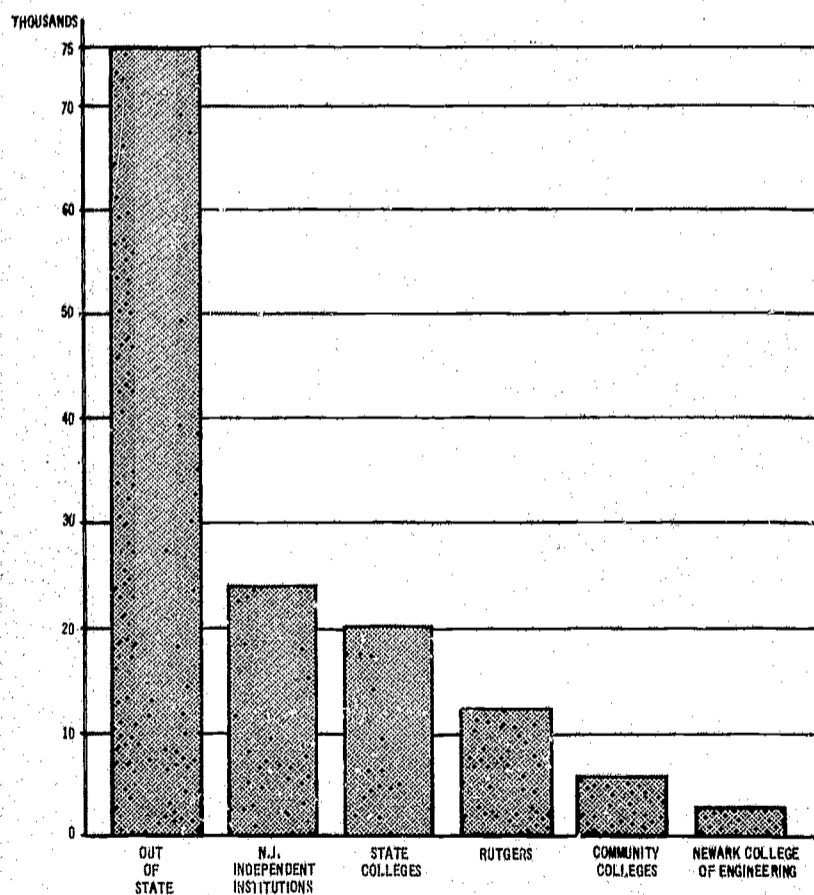




UNDERGRADUATE EDUCATION

This year 139,700 New Jersey students are attending college full time. Where are they enrolled?

- The largest number, 75,000 or 54%, go out-of-state. Fifty percent of these attend college in the nearby states of New York and Pennsylvania; the remainder are scattered across the nation. Most (75%) attend private institutions.
- Almost 24,000 New Jersey students are enrolled at independent institutions in the state.
- More than 20,700 attend our six State Colleges in Glassboro, Jersey City, Newark, Paterson, Montclair and Trenton.
- Just 12,000 attend Rutgers at either the Camden, Newark, or New Brunswick campuses.
- About 5,500 go to the six community colleges in Atlantic, Camden, Cumberland, Mercer, Middlesex, and Ocean counties. (Six additional community colleges—in Bergen, Essex, Gloucester, Monmouth, Morris and Somerset counties—will begin operation next fall, and Burlington County College will open in the fall of 1969.)
- Just over 2,600 attend the Newark College of Engineering.



**Distribution of
full-time undergraduate enrollment
of New Jersey students,
1967-68**

In addition, over 43,000 students are enrolled as part-time undergraduates within the state.

It has been mentioned that New Jersey provides higher education for a smaller percentage of its students—46%—than any other state. In the United States as a whole, in contrast, 79% of students attend colleges within their home state.

Providing for the Future

That means that in looking toward the future the state faces an immense task—not only to provide college opportunities for the growing numbers of young men and women who will graduate from high school in the years ahead, but also to build facilities not built in past years so that our youth in the future are at least no more dependent than at present on college openings in other states.

Our best estimate is that 220,000 New Jersey students will wish to enroll as full-time day college students in 1975. That is an increase of 80,000 over the number who attend college today. Two factors cause this:

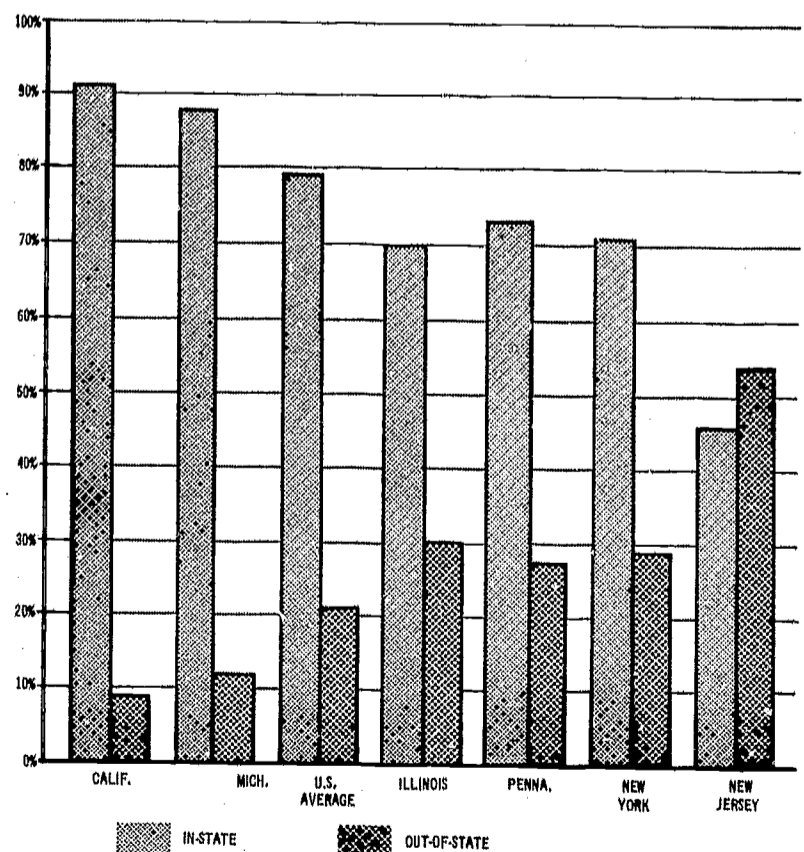
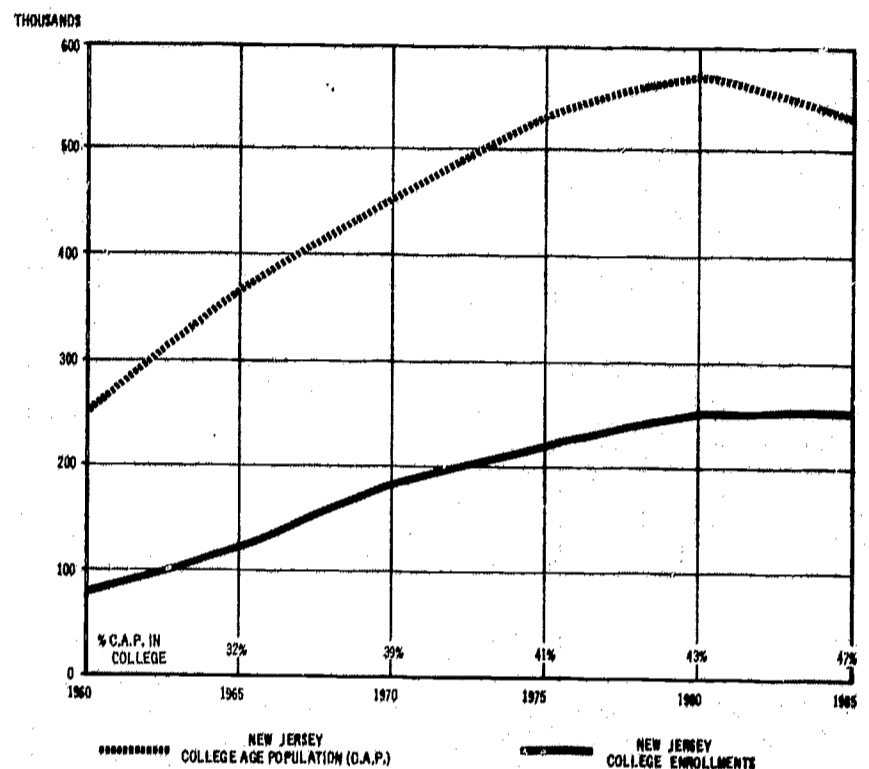
- First, a steady increase in the college age population.
- Second, a steady increase in the percentage of these high school graduates who will choose to attend college so as to prepare themselves for employment in an increasingly technical economy.

How is the state to provide college opportunities for these additional 80,000 students?

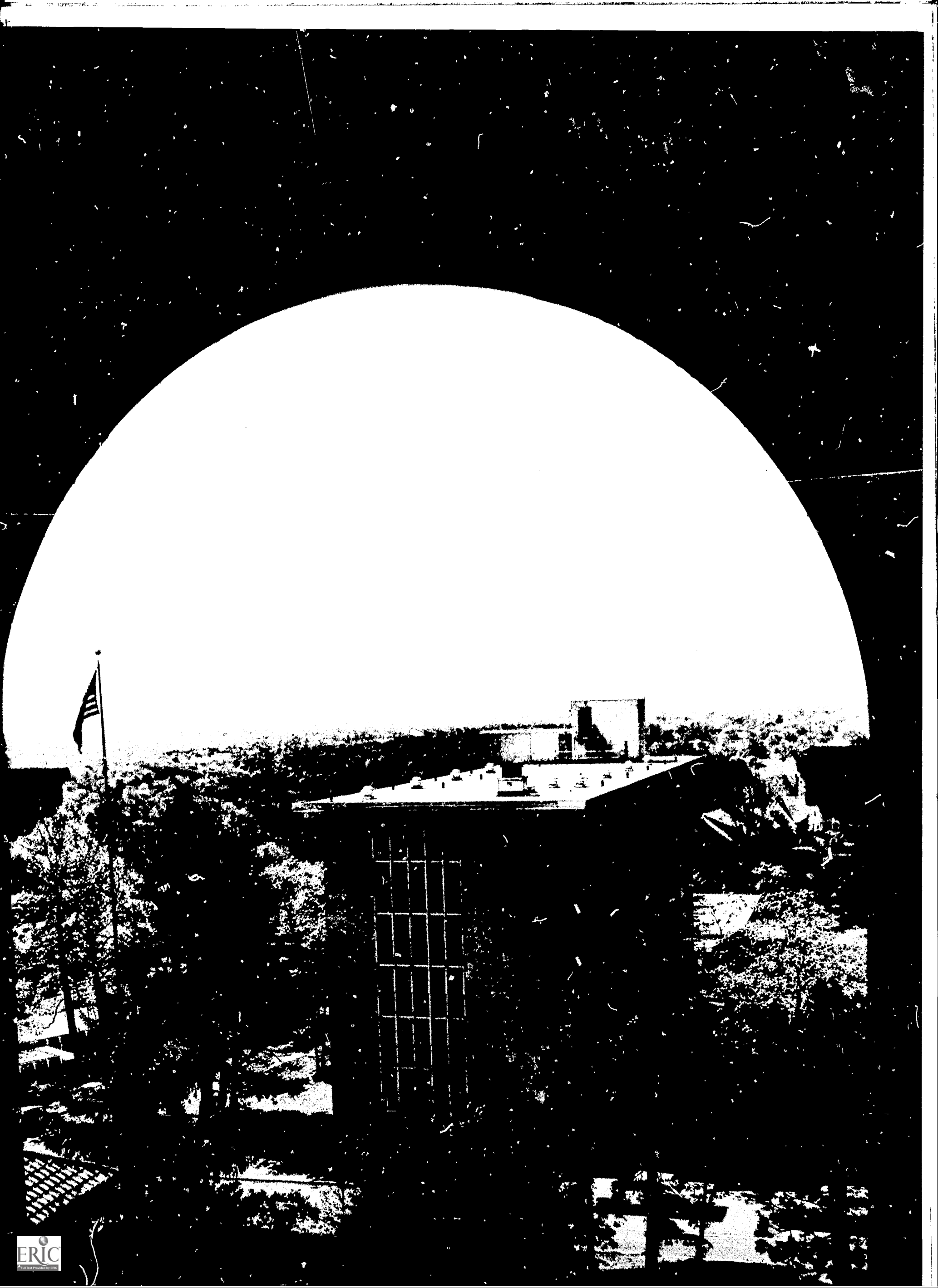
If the state were to continue the pattern followed in the past, most of these students would be expected to attend institutions out-of-state, primarily in New York and Pennsylvania. Obviously, the state's small size and its proximity to New York and Philadelphia have made it easier for many New Jersey students to go to college out-of-state; significant numbers of our youth have attended institutions such as Columbia, New York University and Fordham in New York and the University of Pennsylvania, Temple and Drexel in Philadelphia.

The Board has no doubt that many New Jersey students will continue to attend these and other nearby out-of-state institutions. The question the Board has had to answer, however, is whether these institutions can be relied upon to educate the greatly increased number of New Jersey students—80,000 additional—expected in the future.

New Jersey college age population (18-21) and full-time undergraduate enrollments 1960-1985

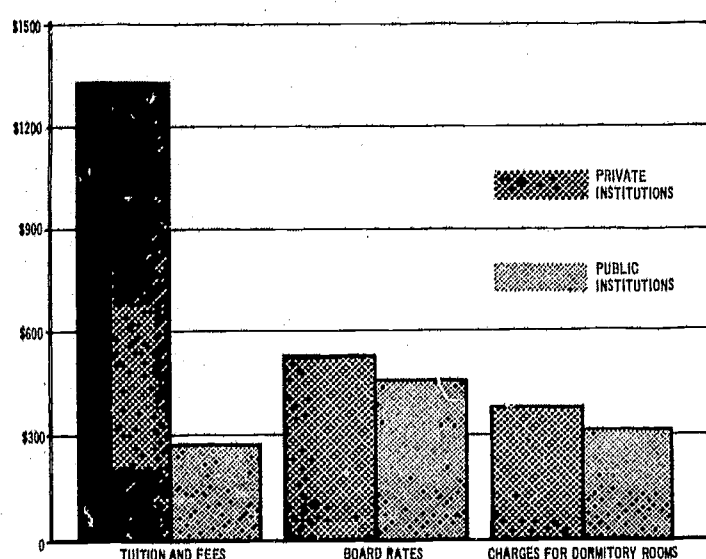
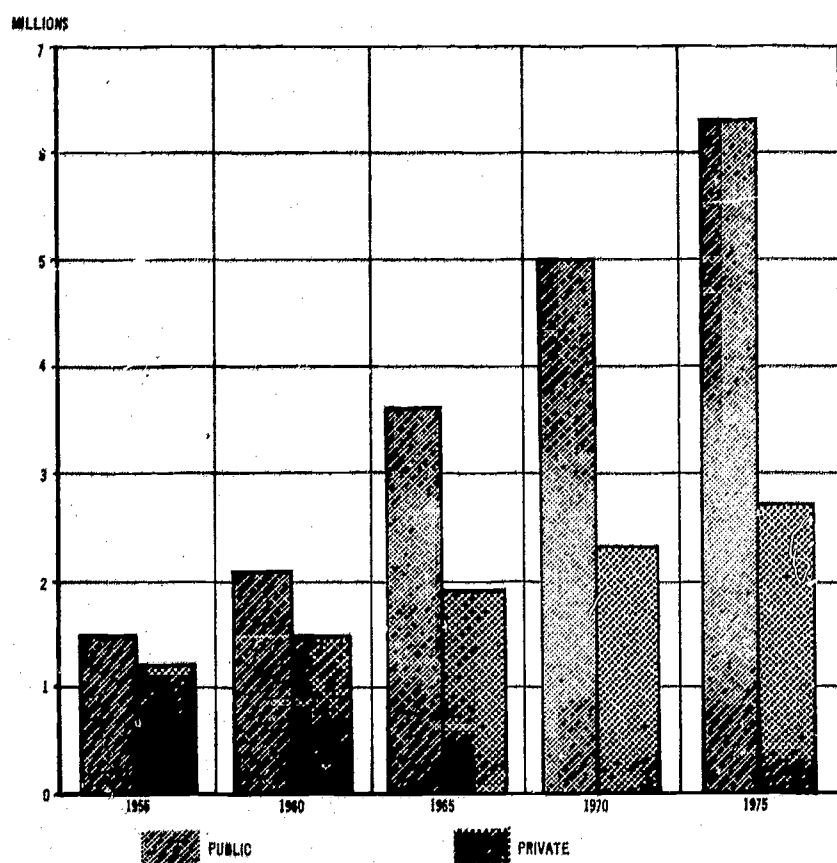


Enrollment patterns in selected states, 1966



Comparison of nationwide enrollment growth, public vs. private institutions of higher education. (in millions)

Source: U.S. Office of Education



Average costs of attending college, 1967-68.

The cost of higher education can vary greatly depending on tuition and room and board. This estimate, prepared by the Office of Education, indicates the wide variations which are possible.

It is our conclusion that the state cannot rely on out-of-state institutions to enroll this increased number of students. We think this for three reasons:

- First, 75% of our out-of-state students attend private institutions. This class of institutions has been growing comparatively slowly—at less than 5% a year. Even this modest growth rate may not continue because of the difficult financial problems which all private institutions now face. Thus the main source of out-of-state places cannot be expected to expand at the necessary rate.
- Second, public institutions in other states have not given any indication that they intend to provide greatly increased numbers of places for New Jersey students. These states face rapidly increasing enrollments of their own youth and are hard pressed to construct facilities for them. In fact, certain states have given evidence of an intention to cut back on the number of New Jersey students now accepted. Thus this source of out-of-state places cannot be relied on either.
- Third, attendance at an institution out-of-state—public or private—is expensive. Tuition is high, and in most cases the student must pay room and board. Thus for many low and middle income students the cost of an out-of-state education is prohibitive.

In summary, the Board does not see how 80,000 additional students can go out-of-state in 1975. Private institutions are not growing rapidly enough and public institutions are refusing to accept New Jersey students. And the cost of out-of-state education already is intolerable for many students.

Recommendations

Therefore, the Board concludes that the state must construct sufficient student places so that no additional students need go out-of-state in 1975 over the number going out-of-state today. In addition, the Board believes the state must construct a small percentage of extra spaces for students from other states, both to make New Jersey's institutions more



diverse and to insure that other states will continue to accept New Jersey students.

Accordingly, the Board recommends that the state create 83,000 undergraduate college places, distributed as follows:

COMMUNITY COLLEGES

- The six existing community colleges now enroll 5,500 full-time New Jersey students. These institutions offer both the first two years of liberal arts and a variety of technical and occupation-ally directed programs and are relatively inexpensive for either full-time students or the large number of part-time students. By 1975, the full-time day enrollment of the enlarged community college system should grow to 42,000. Total facilities cost for the community colleges will be \$252 million. The state's share (50%) will be \$126 million, of which \$17.2 million has already been appropriated. Hence the additional cost to the state will be \$108.8 million.¹

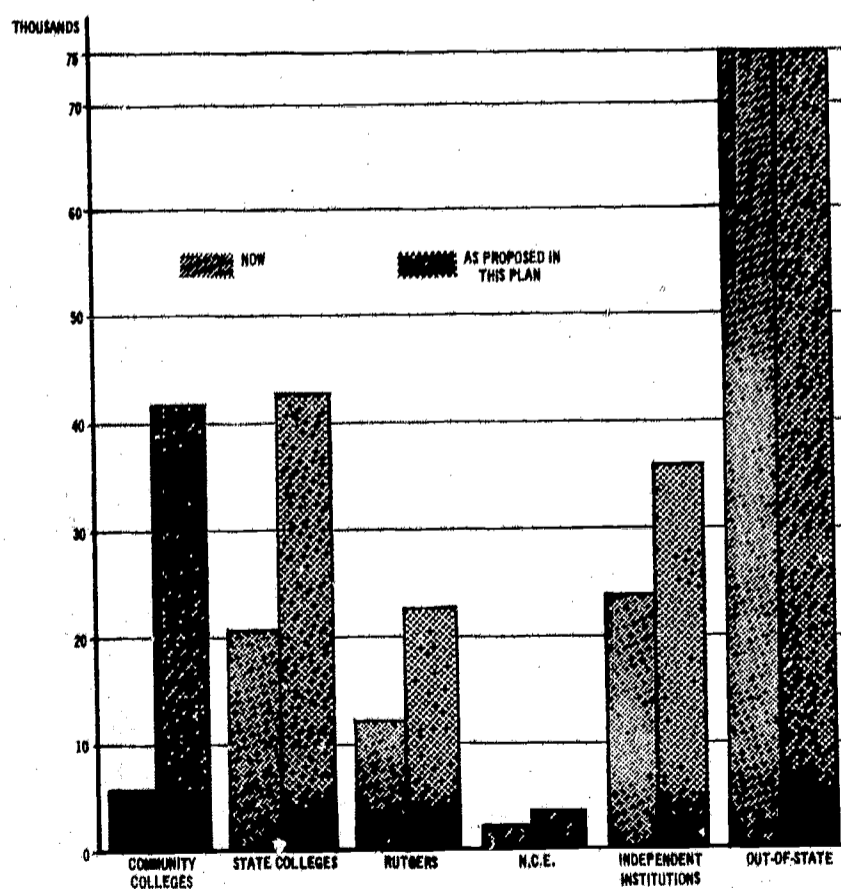
STATE COLLEGES

- The State Colleges now enroll 20,700 full-time New Jersey students. Until recently the State Colleges had concentrated on teacher education but now they are broadening their curricula to provide offerings in arts and sciences, thereby preparing students for a variety of occupations.

By 1975, the State College enrollment should expand by 24,000 to 44,700. A significant percentage of these new places will be filled by graduates of the community colleges who wish to continue their education. Total facilities cost of this expansion (excluding dormitories, whose construction costs are amortized by the students who live in them) will be \$127.2 million. At least one-half of this enrollment increase should come about through expansion of the six existing campuses and the remainder should be achieved by establishing two new colleges in the northern and southern parts of the state. The facilities cost of establishing new colleges is only slightly higher than expansion of existing institutions. By locating new colleges where the presently unmet demand is greatest, the state will make it possible for students who so choose to live at home and commute to college, thus saving room and board expenses.

RUTGERS UNIVERSITY

- Rutgers now enrolls 13,500 full-time students (of whom 1,500 are from out-of-state). The University offers undergraduate programs in liberal arts, engineering, business, pharmacy and nursing. By 1975, Rutgers should expand to a total of 23,000 undergraduates at its three campuses. A percentage of this increased enrollment will consist of graduates of the community colleges. The



Enrollment of New Jersey students in 1975 compared to 1967-68.

cost of the expansion will be \$57.9 million.

NEWARK COLLEGE OF ENGINEERING

- Newark College of Engineering is one of the nation's largest engineering schools. By 1975, it should expand to 3,600 undergraduates from its present enrollment of 2,700 at a cost of \$8.3 million.

INDEPENDENT INSTITUTIONS

- The state's independent institutions offer a variety of programs. By 1975, it would be desirable for the independent institutions to expand their enrollment of New Jersey students by 50% — from 23,900 to 36,000. The Board doubts this rate of expansion can be achieved without state help. The form of this assistance is a matter which requires further serious study by the Board. The Board believes, however, that the time has come for the state to recognize and support the important public role performed by our independent institutions.

It must be remembered that these recommendations are based on full-time day students. The same facilities can also be used by part-time students, primarily in the evening. Thus the investment of \$303 million will permit at least 80,000 additional part-time students to develop their skills and pursue their interests.

SUMMARY

The following table summarizes the recommended growth in undergraduate enrollments and its cost:

	1967 Enrollment		1975 Enrollment		Cost to State (in millions)
	New Jersey Students	Out-of-State Students	New Jersey Students	Out-of-State Students	
Community Colleges	5,500	*	42,000	*	\$108.8
State Colleges	20,700	*	42,800	1,900	127.2
Rutgers University	12,000	1,500	20,800	2,200	57.9
Newark College of Engineering	2,600	*	3,400	200	8.3
Independent Institutions	23,900	9,100	36,000	9,100	
Total In-State Enrollment	64,700	10,700	145,000	13,400	\$302.2
Total Out-of-State Enrollment	75,000		75,000		
Total Enrollment	139,700		220,000		

*Less than 100 students

1) All cost estimates are stated in terms of 1968 construction costs. In the past, construction costs have risen at 3-4% a year, and a similar rise is to be expected in the future.



GRADUATE AND PROFESSIONAL EDUCATION

Strong graduate departments and professional schools provide vital benefits to a state by:

- attracting well-trained college graduates from other parts of the nation
- graduating engineers and other experts to staff business and industry
- training teachers and professors for education institutions in the state
- providing a spur for industrial growth through consultation and research and development
- raising the quality of the state's cultural life.

New Jersey's situation in graduate and professional education is just as alarming as that faced in undergraduate education.

Enrollments Today

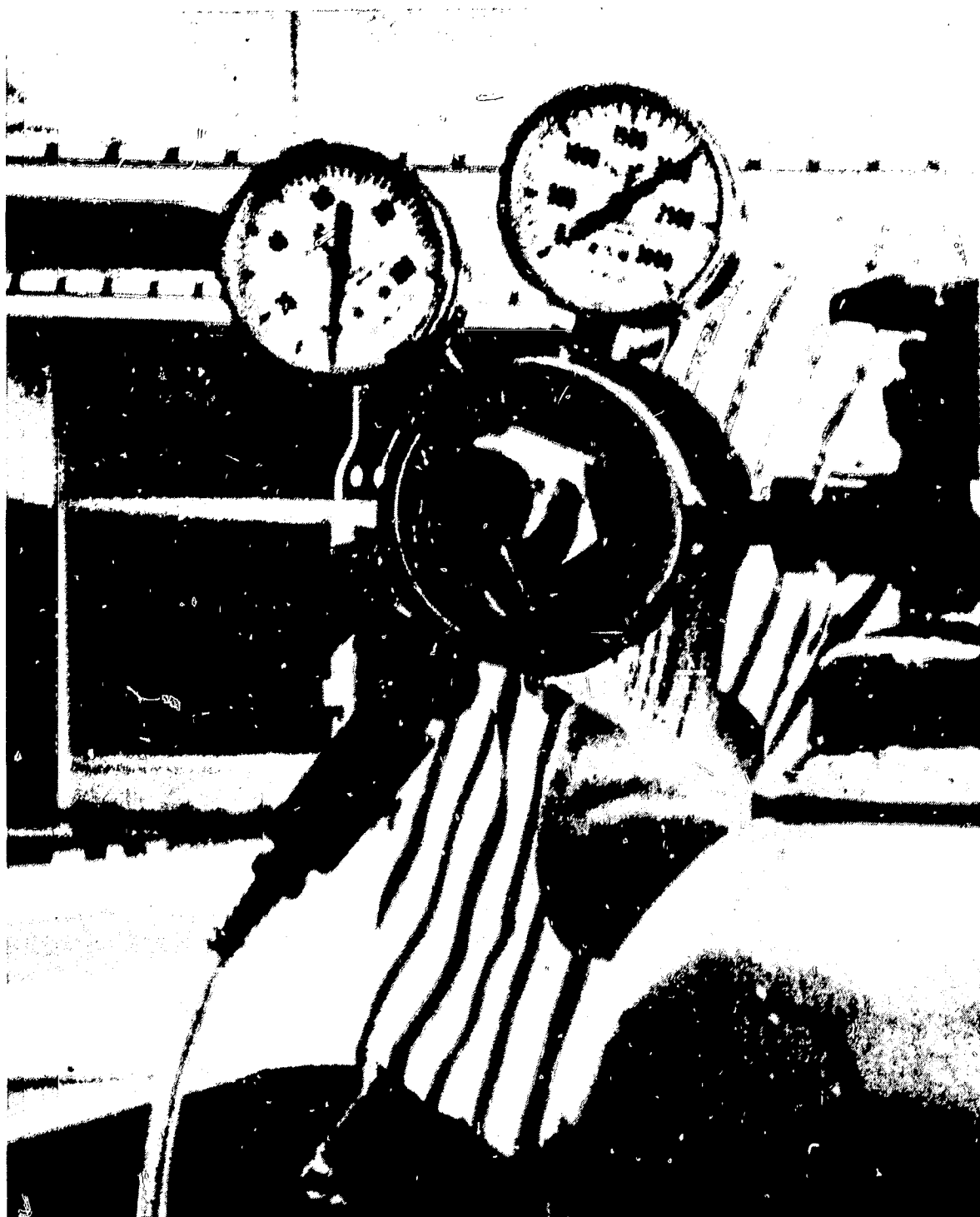
This year full-time graduate enrollment in New Jersey (excluding medical and dental students) is 6,355. Eighty-nine percent of these are concentrated at five institutions:

Rutgers University	2,698
Princeton University	1,451
Seton Hall University	713
Princeton Theological Seminary	461
Fairleigh Dickinson University	353

In addition, over 20,200 students, more than half of them teachers, are enrolled as part-time graduate students in New Jersey institutions.

The weakness of New Jersey's position is revealed by the following statistic: last year, on the basis of our share of the nation's graduate school age population (4%)¹, New Jersey's "fair share" of the nation's full-time graduate and professional enrollment of 537,000 should have been 21,500. In fact, the state last year enrolled 5,646 full-time graduate and professional students—only 26% of its "fair share".

1) Whereas New Jersey has 3.5% of the nation's total population, it has 4% of the nation's graduate school age population, defined as persons between the ages of 20 and 44.



Recommendations

The Board believes the future economic strength and quality of life in New Jersey is dependent on development of more adequate graduate and professional education.

At the present time, therefore, the Board believes the state's objective should be to create the equivalent of 10,000 additional full-time graduate and professional places by 1975.

Many of these places may not be full-time in the usual sense. Given New Jersey's concentration of industry heavily dependent on research and technology, the most logical pattern may involve extensive part-time arrangements. More study will be needed before definitive recommendations can be made.

But the Board believes that the following fact indicates that an expansion of this magnitude is required: even with 10,000 additional places, for a total of 16,355, New Jersey in 1975 will be providing only 52% of what will then be its "fair share". For the nation's total graduate and professional enrollments are expected by 1975 to increase to

788,500, of which New Jersey's "fair share" (4% of the total) will be 31,540. A state dependent on research and technology, with expanding needs for highly trained personnel in all fields, cannot afford to provide less than 52% of its state's "fair share" of graduate and professional training.

More than half the increase is likely to take place at Rutgers, the State University, the remainder at the State Colleges, the Newark College of Engineering and the independent institutions.

Facilities costs for graduate and professional students vary widely. Engineering and scientific curricula are very expensive whereas some liberal arts curricula cost considerably less. Costs cannot be determined exactly until the future pattern of graduate and professional education is decided. Nevertheless, the facilities cost to create 10,000 additional places will be approximately \$150 million.



MEDICAL AND DENTAL EDUCATION

The state has made the decision to build two new medical schools:

- The New Jersey College of Medicine and Dentistry has begun development of its new campus in Newark.
- The Rutgers Medical School has started a two-year program in New Brunswick and will expand to a four-year program over the next several years.

The Board believes these two medical schools are essential to the state to:

- provide opportunities for young New Jersey men and women to become doctors and dentists
- improve medical and dental care for the citizens of the state
- increase the number of young doctors seeking to perform their internship in New Jersey hospitals
- make a more reasonable contribution to meeting the medical manpower requirements of the nation.

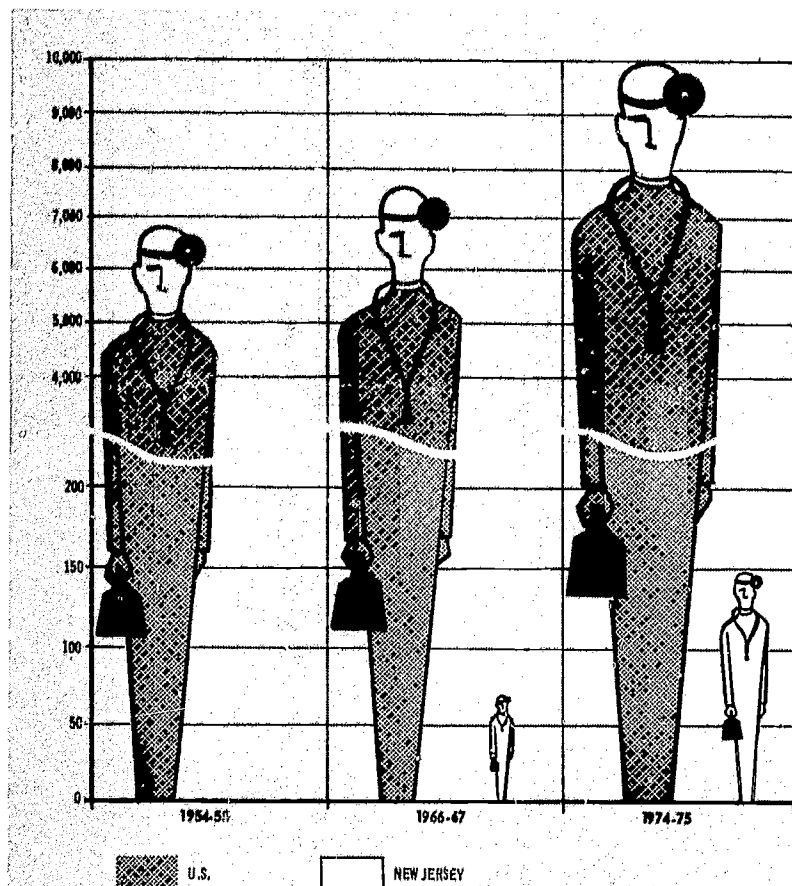
Costs of Medical Education

Medical and dental education is expensive. The cost of the two schools under development is currently estimated at \$165.5 million. The Federal government and private sources are expected to provide \$99.5 million. The remaining state share is therefore \$66 million, of which \$25.3 million has been or will soon be appropriated. That leaves \$40.7 million still to be provided.

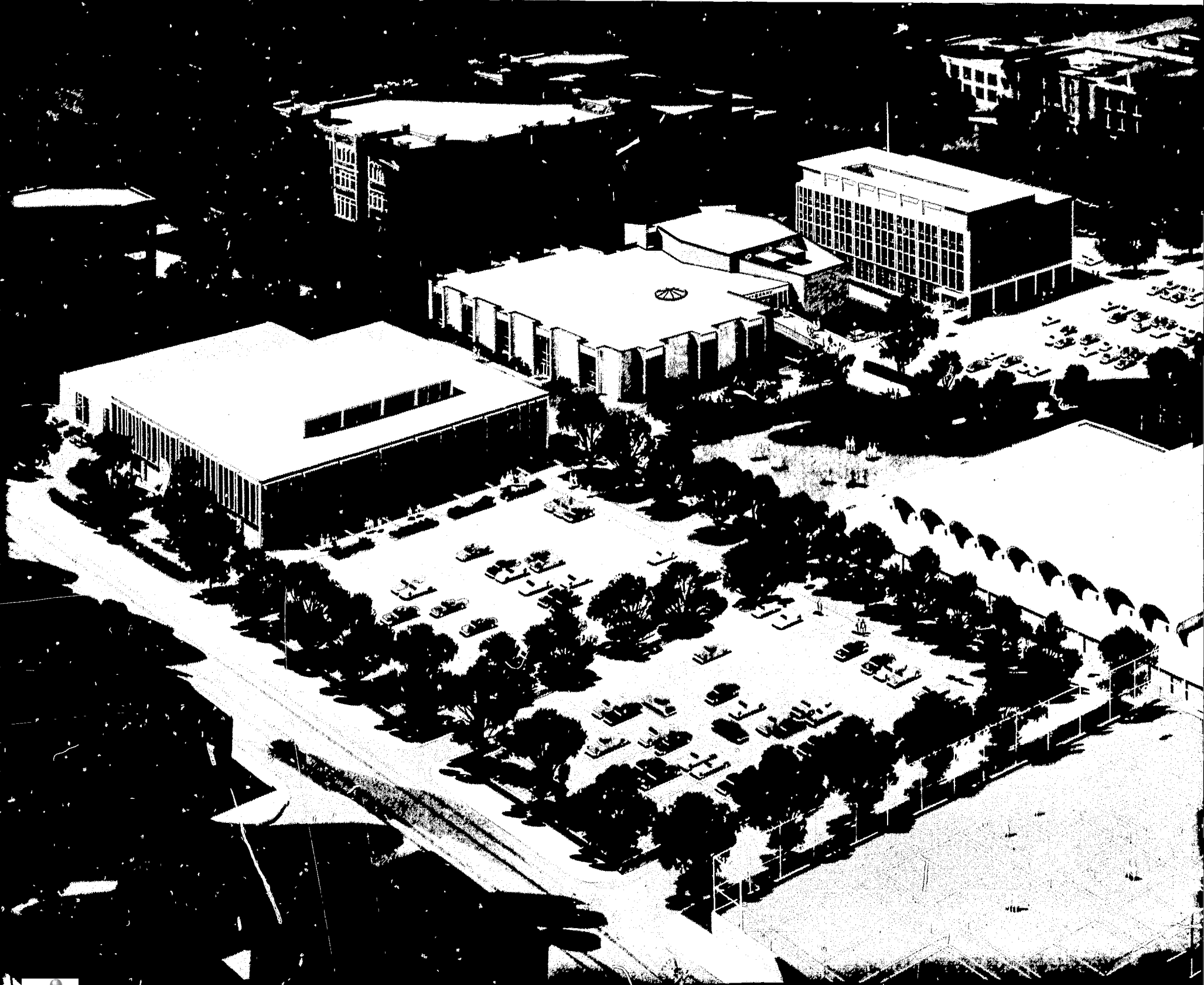
While this cost estimate is as firm as one can make at the present time, construction costs for medical schools have escalated enormously in past years. Further increases may be experienced as medical technology and other requirements change.

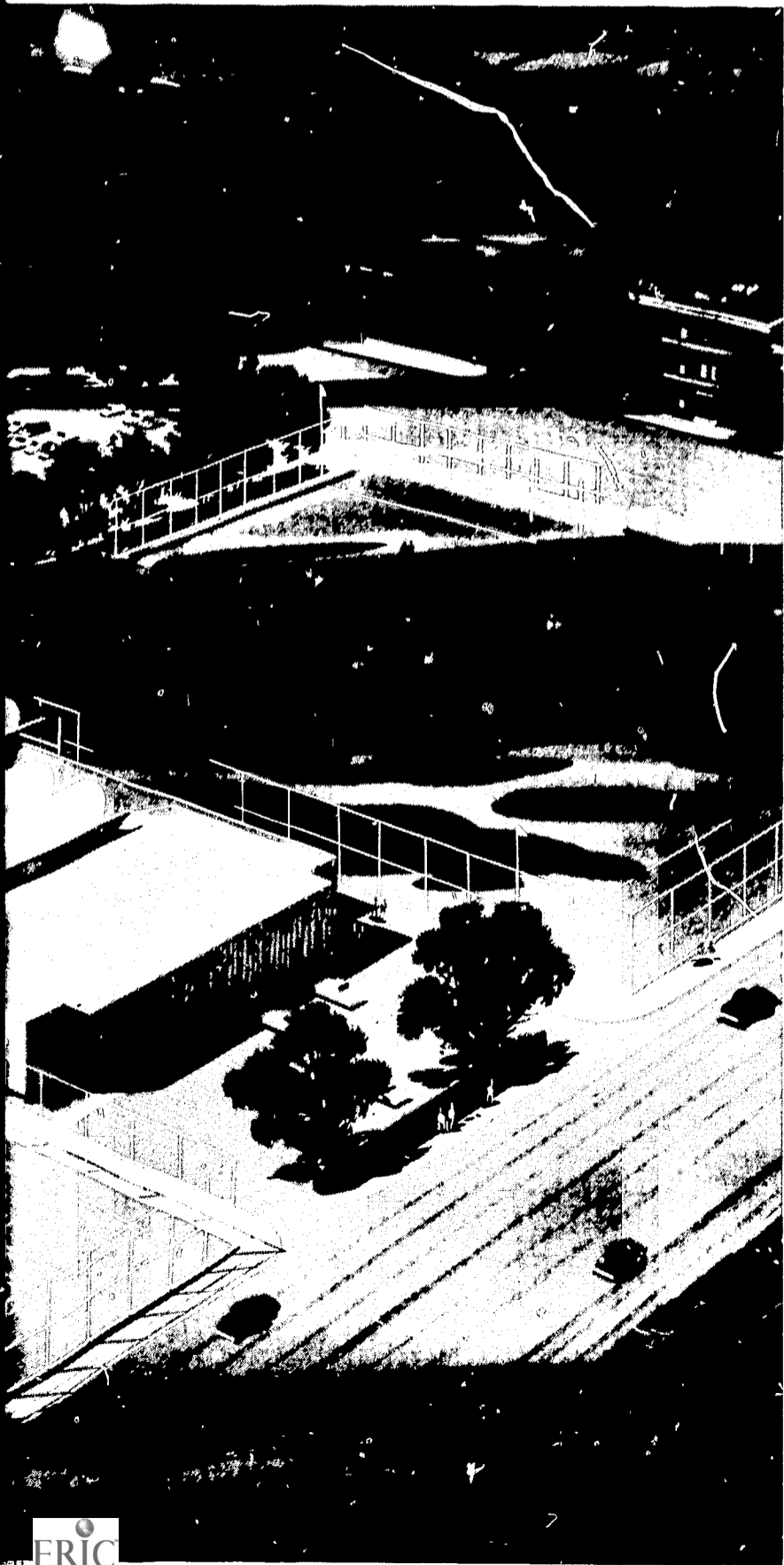
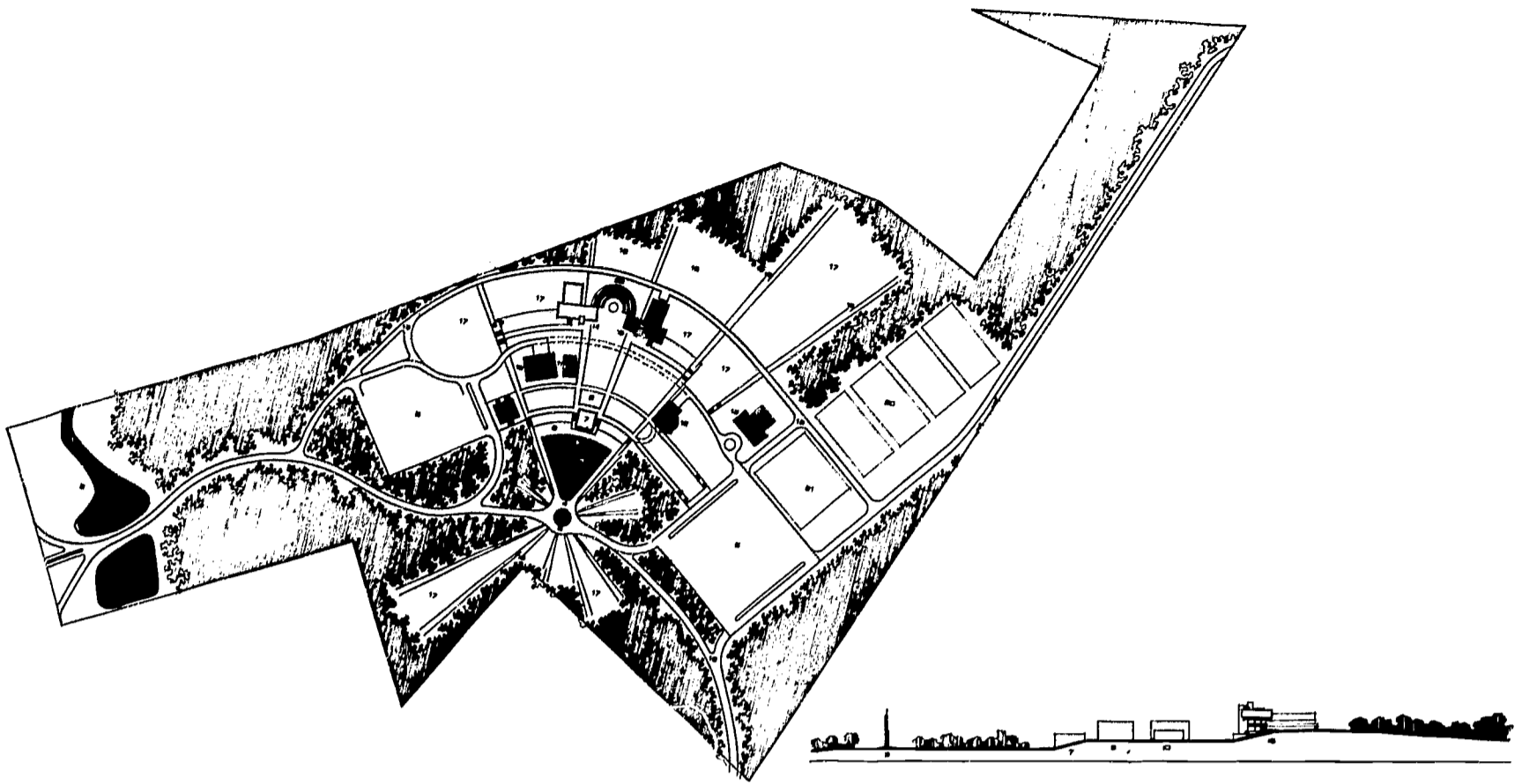
Recommendation

The Board believes that the state must develop these two medical schools and recommends that the remaining state share, presently estimated at \$40.7 million, be provided as required.



Graduates of New Jersey medical schools compared to the national total





SUMMARY OF RECOMMENDATIONS

The Board of Higher Education recommends that the state spend \$493 million on higher education facilities between now and 1975:¹

- on undergraduate education, the Board recommends expenditures of \$302 million. This will create places for 83,000 undergraduate students, raising the percentage of New Jersey youth able to attend college in-state from 46% today to 66% in 1975.
- on graduate and professional education, the Board recommends expenditures of \$150 million. This will create places for 10,000 graduate students and thereby help to meet the need for highly trained personnel in business, industry, government and education.
- on medical and dental education, the Board recommends expenditures of \$41 million. This will make possible the completion of the two new medical schools.

Obviously such an estimate is subject to a number of qualifications. First, it is based on 1968 construction costs. Construction costs are likely to increase at 3-4% a year as they have in the past. This will increase the cost by as much as \$85 million. Second, most observers are convinced that the multiple-bid procedure presently used for state construction increases costs by 10-20%; if this law were changed (and the Board would urge strongly that it be repealed), a saving of \$50 to \$100 million might be possible. Third, state supported institutions probably will receive Federal assistance in addition to that already included in the medical-dental school estimate—perhaps \$25-50 million between now and 1975. Fourth, developments in technology could significantly alter the facilities requirements for higher education (undoubtedly upward as most past changes—instructional TV, for example—have done).

In short, various factors may influence the Board's cost estimates. Adjustments, if they become necessary, are likely to raise the estimates. **But at the present time the Board believes that \$493 million is a solid statement of the investment required which is, if anything, conservative.**

Clearly the expansion of facilities recommended here will result in increased operating costs. The major factor will be the salaries of additional teachers. For undergraduates alone, the recommendation calls for more than a doubling of enrollments. A doubling of the number of teachers will therefore in all probability be required. The Board is not yet able to give firm estimates of future operating costs, but there is no doubt that the increase over present levels will be significant.

1) The Governor's Commission to Evaluate the Capital Needs of New Jersey, in its report on April 28, 1968, recommended capital expenditures of \$492.4 million for higher education.

CONCLUSION

The Board of Higher Education has presented its recommendations on the needs for higher education facilities between now and 1975. The Board believes that the need for these facilities is unassailable. Who can argue against the importance of higher education for our young men and women seeking to prepare for the complex world of the future?

Although half a billion dollars seems large contrasted with the state's past financial commitment to higher education, we consider this amount to be the very least that must be invested to turn the tide. The deficit in college spaces is growing rapidly. When the Citizens Committee issued its "Call to Action" more than two years ago, it deplored New Jersey's annual export of 62,000 students; in just two years, exports have escalated to 75,000. The state's increasing needs in graduate and professional and medical and dental education cannot be neglected either.

We think the public is painfully aware of the growing crisis. It is aware, too, that college facilities require years to build and that the tide of student demand for the 1970's is already moving up through the schools. The need is immediate.

APPENDIX

The following pages provide a detailed listing of facilities at each campus which are of immediate priority.

These facilities are at different stages of development. Some are in the early stage of construction. Some are in the design stage or are ready to go to bid. Most are in early stages of planning. All are ready to move forward once funds are provided. That is not to say that every facility on the following pages will be built exactly as described. Nor is every facility needed in the next several years listed in the materials that follow. No program of long range planning can afford to be rigidly precise. Particularly in education planning, latitude must be retained for the adjustment of priorities by Boards of Trustees, college administrators, and faculty. Nevertheless, the detailed summary does indicate in a concrete manner the types and magnitudes of the investments in higher education facilities which must be undertaken over the next several years.

The listing includes self-liquidating facilities such as dormitories, dining halls and student unions which are expected to be financed by the Educational Facilities Authority subject to the outcome of litigation involving certain constitutional issues. This Authority was established in 1966 to provide capital for the construction of self-liquidating facilities without burdening the taxpayer.

RUTGERS, THE STATE UNIVERSITY	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
University Heights Campus				
Pharmacy Building	\$ 3,721,000	\$ 2,200,000	\$ 293,000	\$ 1,228,000
Medical School	18,508,000	12,508,000	5,000,000	1,000,000
Mathematics-Statistics-Computer Information Processing Center	7,256,000	2,181,000	507,000	4,568,000
Wright Chemistry Laboratory				
Addition & Renovation	5,250,000	—0—	220,000	5,030,000
Psychology Building	3,994,000	—0—	200,000	3,794,000
Medical School Expansion & Teaching Hospital	75,000,000	45,000,000	—0—	30,000,000
Utilities Improvement & Hoes Lane Relocation	500,000	—0—	—0—	500,000
College Avenue Campus				
Winants Hall—Renovation	3,100,000	—0—	—0—	3,100,000
Main Library—Alterations	100,000	—0—	—0—	100,000
Kilmer Campus				
Library	3,514,000	914,000	260,000	2,340,000
Livingston College II— Academic Buildings	6,252,000	—0—	530,000	5,722,000
Academic Buildings— First Half of Second College	6,937,000	—0—	—0—	6,937,000
Douglass Campus				
Classroom—Office Building	4,200,000	—0—	210,000	3,990,000
Agriculture Campus				
Food Service Building	3,674,000	1,524,000	407,000	1,743,000
Newark Campus				
Classroom—Office Building and Central Heating Plant	5,330,000	1,530,000	1,211,000	2,589,000
Graduate School of Business Administration	4,900,000	2,450,000	245,000	2,205,000
Classroom—Office Building	4,000,000	—0—	200,000	3,800,000
Land Acquisition	350,000	—0—	—0—	350,000
South Jersey Campus				
Law School Building	4,745,000	—0—	220,000	4,525,000
Gymnasium & Physical Education Building	2,482,000	—0—	90,000	2,392,000
Land Acquisition	600,000	—0—	—0—	600,000
Classroom—Office Building	4,704,000	—0—	—0—	4,704,000
Total	\$169,117,000	\$68,307,000	\$ 9,593,000	\$91,217,000 ¹
SELF-LIQUIDATING FACILITIES				
Kilmer Campus				
Livingston College II—Dormitories, Dining Hall, Student Center	15,609,000			
Hillside Campus				
Married Student Housing	9,241,000			
Douglass Campus				
Dining Hall (Cooper Replacement)	1,890,000			
Dormitory & Dining Hall (Gibbons Campus)	5,283,000			
Newark Campus				
Campus Center Addition— Bookstore—Infirmary	6,563,000			
South Jersey Campus				
College Center Addition	2,870,000			
Total	41,456,000			
Total	\$210,573,000			

¹The Governor's 1968-1969 budget requests appropriation of \$8,400,000 for Rutgers University.

NEW JERSEY COLLEGE OF MEDICINE AND DENTISTRY	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Land Acquisition	\$ 1,009,000	—0—	\$ 1,009,000	—0—
Sciences Building	34,563,000	\$19,360,000	3,926,000	\$11,277,000
Dental School	10,301,000	5,950,000	1,125,000	3,226,000
Hospital	22,893,000	14,439,000	2,185,000	6,269,000
Library	2,077,000	1,584,000	130,000	363,000
Auditorium	1,166,000	676,000	125,000	365,000
Total	\$72,009,000	\$42,009,000	\$ 8,500,000	\$21,500,000 ¹
SELF-LIQUIDATING FACILITIES				
Underground Garage	4,000,000			
Student Dormitories & Student Union	10,000,000			
Total	14,000,000			
Total	\$86,009,000			

¹The Governor's 1968-69 budget requests appropriation of \$10,750,000 for the New Jersey College of Medicine and Dentistry.

NEWARK COLLEGE OF ENGINEERING	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Renovation of Older Buildings	\$ 440,000	-0-	\$ 240,000	\$ 200,000
Two Dormitories	4,442,000	\$ 2,000,000	-0-	2,442,000
Academic Building	5,355,000	-0-	-0-	5,355,000
Land Purchases	1,379,000	-0-	-0-	1,379,000
Food Service Building	998,000	-0-	-0-	998,000
Laboratory Building	1,740,000	-0-	-0-	1,740,000
Total	\$14,354,000	\$ 2,000,000	\$ 240,000	\$12,114,000

GLASSBORO STATE COLLEGE	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Science Building	\$ 1,800,000	-0-	-0-	\$ 1,800,000
Classroom-Office Building	2,300,000	-0-	-0-	2,300,000
Library Addition	1,140,000	-0-	-0-	1,140,000
Maintenance & Storage Facility	600,000	-0-	-0-	600,000
Improve Drainage	300,000	-0-	-0-	300,000
Expansion & Renovation of Roads, Paths & Parking Facilities	400,000	-0-	-0-	400,000
Air-Condition Auditorium & Dining Hall	175,000	-0-	-0-	175,000
Total	\$ 6,715,000	-0-	-0-	\$ 6,715,000
SELF-LIQUIDATING FACILITIES				
Student Union	3,500,000			
Dormitories	7,950,000			
	11,450,000			
Total	\$18,165,000			

JERSEY CITY STATE COLLEGE	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Addition to Grossnickle Hall	\$ 1,086,000	-0-	-0-	\$ 1,086,000
Addition to Library	800,000	-0-	-0-	800,000
Maintenance & Storage Facility	660,000	-0-	-0-	660,000
Acquisition of Land—State Normal Place	495,000	-0-	-0-	495,000
Renovation and Air-conditioning of Fries and Hepburn Halls	500,000	-0-	-0-	500,000
Total	\$ 3,541,000	-0-	-0-	\$ 3,541,000
SELF-LIQUIDATING FACILITIES				
Student Union	3,500,000			
Total	\$ 7,041,000			

NEWARK STATE COLLEGE	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Laboratory & Classroom Building	\$ 2,000,000	-0-	-0-	\$ 2,000,000
Classroom-Office Building	2,500,000	-0-	-0-	2,500,000
Maintenance & Storage Facility	660,000	-0-	-0-	660,000
Expansion & Renovation of Roads, Walks & Parking Facilities	600,000	-0-	-0-	600,000
Air-Condition College Center	120,000	-0-	-0-	120,000
Total	\$ 5,880,000	-0-	-0-	\$ 5,880,000
SELF-LIQUIDATING FACILITIES				
Dormitories	5,100,000			
Total	\$10,980,000			

PATERSON STATE COLLEGE	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Laboratory-Classroom Building	\$ 2,400,000	-0-	-0-	\$ 2,400,000
Classroom-Office Building	1,900,000	-0-	-0-	1,900,000
Maintenance & Storage Facility	560,000	-0-	-0-	560,000
Air-Conditioning of Shea & Hunziger	275,000	-0-	-0-	275,000
Expansion & Renovation of Roads, Walks & Parking Facilities (including purchase of land for new entrance road)	850,000	-0-	-0-	850,000
Total	\$ 5,985,000	-0-	-0-	\$ 5,985,000
SELF-LIQUIDATING FACILITIES				
Student Union	3,500,000			
Dormitories	5,100,000			
	8,600,000			
Total	\$14,585,000			

MONTCLAIR STATE COLLEGE	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Library Addition	\$ 2,000,000	-0-	-0-	\$ 2,000,000
Laboratory-Classroom Building	2,000,000	-0-	-0-	2,000,000
Renovation of Maintenance & Storage Facilities	660,000	-0-	-0-	660,000
Land Purchase & Construction of Railroad Overpass	400,000	-0-	-0-	400,000
Renovation of College Hall	375,000	-0-	-0-	375,000
Resurfacing Roads & Approaches	333,000	-0-	-0-	333,000
Renovation & Reconstruction of Service Facilities (steam lines, conduits, etc.)	600,000	-0-	-0-	600,000
Replacement of Roofs on Three Dormitories	180,000	-0-	-0-	180,000
Total	\$ 6,548,000	-0-	-0-	\$ 6,548,000
SELF-LIQUIDATING FACILITIES				
Student Union	3,500,000			
Dormitories	5,100,000			
	8,600,000			
Total	\$15,148,000			

TRENTON STATE COLLEGE	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Laboratory-Classroom Building	\$ 3,200,000	-0-	-0-	\$ 3,200,000
Maintenance & Storage Facility	820,000	-0-	-0-	820,000
Expansion & Renovation of Roads, Walks & Parking Facilities	190,000	-0-	-0-	190,000
Replacement of Steam Lines	168,000	-0-	-0-	168,000
Air-Condition Science & Math Building	250,000	-0-	-0-	250,000
Renovation of Green Hall	675,000	-0-	-0-	675,000
Total	\$ 5,303,000	-0-	-0-	\$ 5,303,000
SELF-LIQUIDATING FACILITIES				
Student Union	3,500,000			
Dormitories	5,100,000			
	8,600,000			
Total	\$13,903,000			

NEW STATE COLLEGE--NORTHERN NEW JERSEY	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Land	\$ 2,500,000	-0-	-0-	\$ 2,500,000
Site Development	850,000	-0-	-0-	850,000
Campus Development Plan	250,000	-0-	\$ 250,000	-0-
Library	3,000,000	-0-	-0-	2,500,000
Auditorium	1,500,000	-0-	-0-	1,500,000
Science Building	2,250,000	-0-	-0-	2,250,000
Classroom-Faculty Office Building	3,500,000	-0-	-0-	3,500,000
Administration Building	350,000	-0-	-0-	300,000
Physical Education Facilities	1,500,000	-0-	-0-	1,500,000
Maintenance & Storage Facility	500,000	-0-	-0-	500,000
Total	\$16,200,000	-0-	\$ 250,000	\$15,950,000
SELF-LIQUIDATING FACILITIES				
Dormitory	2,550,000			
Student Union	2,000,000			
	4,550,000			
Total	\$20,750,000			

NEW STATE COLLEGE--SOUTHERN NEW JERSEY	Estimated Total Cost	Anticipated Federal Grants & Private Gifts	Prior State Appropriations	Net Requirement
Land	\$ 1,250,000	-0-	-0-	\$ 1,250,000
Site Development	850,000	-0-	-0-	850,000
Campus Development Plan	250,000	-0-	-0-	250,000
Library	3,000,000	-0-	-0-	3,000,000
Auditorium	1,500,000	-0-	-0-	1,500,000
Science Building	2,250,000	-0-	-0-	2,250,000
Classroom-Faculty Office Building	3,500,000	-0-	-0-	3,500,000
Administration Building	350,000	-0-	-0-	350,000
Physical Education Facilities	1,500,000	-0-	-0-	1,500,000
Maintenance & Storage Facilities	500,000	-0-	-0-	500,000
Total	\$14,950,000	-0-	-0-	\$14,950,000
SELF-LIQUIDATING FACILITIES				
Dormitory	2,550,000			
Student Union	2,000,000			
	4,550,000			
Total	\$19,500,000			

ATLANTIC COMMUNITY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Science and Technical Building Academic Complex Library & Administration Building Physical Education Building Student Center Maintenance Building Addition to Academic Complex	\$ 4,900,000	\$ 2,450,000	\$ 2,450,000	\$ 1,925,000	\$ 525,000
BERGEN COMMUNITY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Administration Building Library Building Science Building Student Union Health & Physical Education Building Business Center Academic Classrooms	\$24,400,000	\$12,200,000	\$12,200,000	\$ 1,900,000	\$10,300,000
BURLINGTON COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Learning Resources Center Administration Center Student-Faculty Center Academic Center Physical Education Center Service & Maintenance Facility	\$ 7,240,000	\$ 3,620,000	\$ 3,620,000	\$ 80,000	\$ 3,540,000
CAMDEN COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Academic Building (I) Academic Building (II) Engineering Technology Building Library & Media Center Student Center Physical Education Building Administration Building Power Plant Maintenance Building	\$12,500,000	\$ 6,250,000	\$ 6,250,000	\$ 1,230,000	\$ 5,020,000
CUMBERLAND COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Academic Building Library Administration Building Student Activities Building Service Building Learning Resource Center Science-Technical Classroom Building Fine Arts & Student Union	\$10,100,000	\$ 5,050,000	\$ 5,050,000	\$ 1,130,000	\$ 3,920,000
ESSEX COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Student Center Divisional Houses (4) (each to include classrooms, faculty offices, and learning resource & study areas) Administration Building	\$19,500,000	\$ 9,750,000	\$ 9,750,000	\$ 2,200,000	\$ 7,550,000
GLOUCESTER COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Library & College Center Instructional Complex Physical Education Facilities Art Center Mechanical & Aviation Facilities	\$ 5,300,000	\$ 2,650,000	\$ 2,650,000	\$ 180,000	\$ 2,470,000

MERCER COUNTY COMMUNITY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Administration Building					
Liberal Arts Building					
Audio Visual Center					
Math & Science Building					
Engineering & Technology Building	\$17,700,000	\$ 8,850,000	\$ 8,850,000	\$ 1,040,000	\$ 7,810,000
Business-Commerce Center					
Physical Education Facilities					
Student Center					
Library					
Maintenance Building					
MIDDLESEX COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Library					
Science Building					
Physical Education Facility					
Academic Building					
Food Service Building					
Student Center					
Faculty Office Buildings (3)	\$ 9,000,000	\$ 4,500,000	\$ 4,500,000	\$ 3,190,000	\$ 1,310,000
Administration Building					
Theater					
Community Services Building					
Engineering Technology Buildings (2)					
Student Center (New)					
Allied Health Center					
MONMOUTH COUNTY COMMUNITY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
This cost represents a projection by the Board of Trustees of reasonable capital needs for 1,500 students by 1970. The new President and administration of the college are now developing plans for specific buildings.					
	\$ 8,200,000	\$ 4,100,000	\$ 4,100,000	\$ 350,000	\$ 3,750,000
MORRIS COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Administrative Building					
Academic Science Building (with later addition)					
Library	\$14,100,000	\$ 7,050,000	\$ 7,050,000	\$ 1,790,000	\$ 5,260,000
Physical Education Facilities					
Student Community Center (with later addition)					
Maintenance Building					
OCEAN COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Library-Administration Building					
Academic Building					
Lecture Hall					
Student Center (with later addition)	\$ 6,200,000	\$ 3,100,000	\$ 3,100,000	\$ 1,610,000	\$ 1,490,000
Physical Education Facilities					
Instructional-Fine Arts Building					
SOMERSET COUNTY COLLEGE	Total Cost	County Share	State Share	Prior State Appropriation	Remaining State Share
Academic Building					
Library Building					
Student Center					
Performing Arts Center	\$12,000,000	\$ 6,000,000	\$ 6,000,000	\$ 575,000	\$ 5,425,000
Service & Maintenance Facilities					
Physical Education Facility					